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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,678	01/27/2004	Younger Ahluwalia	03137.000007	3037
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EXAMINER				
RUDDOCK, ULA CORINNA				
ART UNIT		PAPER NUMBER		
1794				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/766,678

Applicant(s)

AHLUWALIA ET AL.

Examiner

Ula C. Ruddock

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendments and accompanying remarks filed February 14, 2008. In view of Applicant's response, the previously set forth rejections for claims 2-17 have been withdrawn. However, after an updated search, additional prior art has been found to modify the previously set forth rejection which renders the invention as currently claimed unpatentable for reasons herein below.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 3 is drawn to a filler component. However, this claim is dependent upon claim 2 which has been amended to include a filler component. It is unclear whether the filler component of claim 3 is different from the filler component of claim 2 or if it is the same filler component in both claims. Clarification is required.

Claim Rejections - 35 USC § 103

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahluwalia (US 5,965,257) in view of Farrar (US 5,338,349) and Langer (US 4,600,634). Ahluwalia disclose a structural article used in a wide variety of products including fire walls, vapor barriers, roofing underlayment, and facing sheets (col 3, In 34-42). The articles comprise a substrate having an ionic charge which is coated with a coating having essentially the same ionic charge. The coating consists of a filler material and a binder material. The binder comprises an acrylic latex, specifically Hycar 2679 (col 3, In 5-9). It should be noted that Hycar 2679 polymer emulsion contains synthetic soap, sometimes known as surface active agents or surfactants (col 7, In 16-19), thus meeting Applicant's limitation of a surfactant component. Furthermore, because a surfactant is present in Ahluwalia's composition, surfactant-generated microcells would also be present in the material. The substrate is preferably fiberglass and the filler is selected from fly ash, charged calcium carbonate, and ceramic microspheres. The binder is preferably acrylic latex (abstract) or SBR latex (col 3, In 11-12). Ahluwalia discloses the claimed invention except for the teaching of a gel catalyst component and that a metallic component is adhered to the coated substrate on one or both sides of the substrate.

Farrar (US 5,338,349) discloses a fire resistant and high temperature insulating composition. The composition comprises a binder and a gelling agent. The composition can be used as a coating composition (abstract). The composition can be coated onto articles made of glass and onto fabrics (col 2, In 31-34). Other components of the composition include dyes and fungicides (col 2, In 26-28). The binder used in the composition can be polyvinyl alcohol, which is

a type of binder described in Applicant's specification at paragraph [0019]. The gelling agent is capable of absorbing water and expanding in size to provide a degree of elasticity to the moist composition (col 5, ln 26-29). It should be noted that the gelling agent of Farrar is being equated to the gel catalyst of the present invention.

Langer (US 4,600,634) discloses flexible fibrous endothermic sheet materials for fire protection. The flexible sheet is made of fiberglass and acrylic binder and is useful in building construction (abstract). Fillers useful in the composition include alumina trihydrate (col 3, ln 59). A backing, comprising an aluminum foil, is added to the backing of the sheet material to give an added degree of strength to the sheet material (col 4, ln 8-10).

It would have been obvious to have used Farrar's gelling agent in the composition of Ahluwalia and Langer, motivated by the desire to create a composition that has some degree of elasticity and to improve the fire resistance of the coated material.

It also would have been obvious to one having ordinary skill in the art to have added Langer's aluminum sheet to one or both sides of the coated substrate of Ahluwalia and Farrar, motivated by the desire to create a structural article with increased strength and durability.

7. Claims 2-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahluwalia (US 5,965,257) in view of Farrar (US 5,338,349) and Langer (US 4,600,634) and GB 2167060 (GB '060) or Dugan (US 4,994,317) or Dombeck (US 6,228,497). Ahluwalia disclose a structural article used in a wide variety of products including fire walls, vapor barriers, roofing underlayment, and facing sheets (col 3, ln 34-42). The articles comprise a substrate having an ionic charge which is coated with a coating having essentially the same ionic charge. The coating consists of a filler

material and a binder material. The binder comprises an acrylic latex, specifically Hycar 2679 (col 3, In 5-9). It should be noted that Hycar 2679 polymer emulsion contains synthetic soap, sometimes known as surface active agents or surfactants (col 7, In 16-19), thus meeting Applicant's limitation of a surfactant component. Furthermore, because a surfactant is present in Ahluwalia's composition, surfactant-generated microcells would also be present in the material. The substrate is preferably fiberglass and the filler is selected from fly ash, charged calcium carbonate, and ceramic microspheres. The binder is preferably acrylic latex (abstract) or SBR latex (col 3, In 11-12). The articles are planar in shape and the substrate is coated on one side or both sides depending on the intended application (col 3, In 42-44). The structural material may be coated on one or both sides with a water repellent material, an algicide, an antifungal material, an antibacterial material, a surface friction agent, a flame retardant material, and a coloring dye (col 3, In 54-67 to col 4, In 1-3). The structural article contains 10-25% by weight glass fibers (claim 13) and the coating comprises nearly 85% by weight of the article (col 3, In 17-18). Ahluwalia discloses the claimed invention except for the specific teaching that clay is added to the coating and the teaching of a gel catalyst component and that a metallic component is adhered to the coated substrate on one or both sides of the substrate.

Farrar (US 5,338,349) discloses a fire resistant and high temperature insulating composition. The composition comprises a binder and a gelling agent. The composition can be used as a coating composition (abstract). The composition can be coated onto articles made of glass and onto fabrics (col 2, In 31-34). Other components of the composition include dyes and fungicides (col 2, In 26-28). The binder used in the composition can be polyvinyl alcohol, which is

a type of binder described in Applicant's specification at paragraph [0019]. The gelling agent is capable of absorbing water and expanding in size to provide a degree of elasticity to the moist composition (col 5, In 26-29). It should be noted that the gelling agent of Farrar is being equated to the gel catalyst of the present invention.

Langer (US 4,600,634) discloses flexible fibrous endothermic sheet materials for fire protection. The flexible sheet is made of fiberglass and acrylic binder and is useful in building construction (abstract). Fillers useful in the composition include alumina trihydrate (col 3, In 59). A backing, comprising an aluminum foil, is added to the backing of the sheet material to give an added degree of strength to the sheet material (col 4, In 8-10).

It would have been obvious to have used Farrar's gelling agent in the composition of Ahluwalia and Langer, motivated by the desire to create a composition that has some degree of elasticity and to improve the fire resistance of the coated material.

It also would have been obvious to one having ordinary skill in the art to have added Langer's aluminum sheet to one or both sides of the coated substrate of Ahluwalia and Farrar, motivated by the desire to create a structural article with increased strength and durability.

GB 2167060 discloses a fire resistant material comprising glass wool fibers and one or more selected clays (abstract). The clays are selected to provide an endothermic reaction in the fire resistant material (page 2, In 5-11). Dugan et al. (US 4,994,317) disclose a fabric suitable for use as a flame barrier fabric comprising a flame durable textile fabric (abstract). The fabric comprises inorganic yarns such as glass (col 2, In 37). To provide enhanced resistant to flame and heat, hydrated clay may be incorporated in a silicone layer (col 3, in 58-61). Dombeck (US

6,228,497) disclose a high temperature resistant glass fiber composition comprising glass fibers and a latex binder (abstract). Clay fillers are frequently added to inorganic fiber products to improve their fire resistance (col 1, ln 19-21 and col 5, ln 4-7). It would have been obvious to one having ordinary skill in the art to have added the clay filler taught by GB 2167060 or Dugan et al. or Dombeck to the composite of Ahluwalia and Farrar and Langer, motivated by the desire to create a substrate that has increased flame resistance.

Response to Arguments

8. Applicant's arguments filed February 14, 2008 have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that the invention set forth in claim 1 does not require a substrate. While this may be true, the claims do not preclude the use of a substrate. Furthermore, the claims are drawn to a composite, which by its definition, is "made up of disparate or separate parts or elements." Therefore, if there is no substrate, claim 1 would only be drawn to a coated metallic layer, not to a composite. As a result, the rejection over claim 1 has been maintained.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/U. C. R./

/Ula C Ruddock/
Primary Examiner, Art Unit 1794